Hearing Panel Report

Addressing Pricing Formulas
For Classes 2, 3, 4a and 4b
Based Upon A Public Hearing Held On
February 1 and 2, 2005

This Report of the Hearing Panel regarding proposed amendments to the Stabilization and Marketing Plans for Northern California and Southern California (Plans) is based on evidence received into the Department of Food and Agriculture's hearing folder. The folder includes the Departmental exhibits, written statements and comments received from interested parties, written and oral testimony received at a public hearing held Tuesday, February 1 and Wednesday, February 2, 2005, and written post-hearing briefs.

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EXECUTIVE SUMMARY

Milk production in California reached an all-time high of 36.4 billion pounds during 2004. Annual California cow numbers increased at an average rate of 4-5% over the last 20 years; 3.5% over the last 10 years. California's cheese production set a record in 2004, at 1.95 billion pounds. These statistics speak to California's key role within national milk markets and the nation's dairy sector.

In addition to production costs versus minimum milk prices, rate of production increase, total milk supply, the state's plant capacity, combined with other relevant economic factors, the Department's manufacturing cost study data has been one of the key considerations in the establishment of minimum Class 4a and 4b milk prices.

A whey factor was added to the Class 4b milk pricing formula beginning in April 2003. As the cheese industry matured and environmental regulations became more stringent, the development of whey by-products became more commonplace by necessity. Industry stakeholders acknowledged that these new whey products had the potential of providing positive revenue to the cheese processors. A whey factor was included in an effort to equitably distribute these additional positive revenues amongst producers. During the fall of 2004, the Department released cost study data confirming a higher manufacturing cost allowance for dry skim whey than had previously been included within the whey factor.

The Panel is mindful of using a manageable pricing formula. Cost-justified changes to the whey manufacturing cost allowance must be made. Departmental cost data and hearing exhibits indicate a feasible manufacturing cost allowance for whey seem unattainable given current pricing series. The testimony and evidence presented at the hearing suggest it would be far wiser to remove the skim whey factor from the Class 4b pricing formula than to continue to expand this factor in an arbitrary and inconsistent manner. While economies of scale are critical in successful whey operations, the Panel is also aware that an inappropriate decision on this factor can inadvertently make a previously profitable whey enterprise a losing proposition should it over stimulate the production of a particular whey product.

The federal government has established an indirect safety net for milk prices by maintaining a price support system. It is the Panel's responsibility to balance the producers' need for a fair and equitable milk pricing system with the processors' need to remain competitive within national and international commodity markets. Over the long term, the continued use of the federal support purchase price as price floors in California pricing formulas could place California manufacturing plants at a competitive disadvantage in commercial markets nationwide, thereby resulting in inadequate processing capacity within the state. Inadequate processing capacity could force California's producers to consider other alternatives such as shipping milk out-of-state for processing, relocating dairy facilities out-of-state, and/or sending cows to slaughter. All these alternative options individually and collectively will reduce producers' welfare. Moreover, federal milk marketing orders do not use these federal support purchase prices as price floors at the national level.

Because of its geographical location, the State is dependent upon national markets where the common business practice is purchasing finished products f.o.b. (a pricing term indicating that the quoted price includes the cost of loading goods onto a means to transport at a specified place). Therefore, California's milk pricing formulas have incorporated price

adjusters to reflect the actual prices that California processors receive for the sales of the finished product commodities. The most recent price surveys cover the last two years and are the best reflection of current conditions. These price surveys provided the foundation for the Panel's recommendations. An increase to the butter and nonfat dry milk manufacturing cost allowance is cost-justified, just as a decrease in the Cheddar cheese manufacturing cost allowance is cost-justified.

Cheese yield and vat tests for fat and solids–not–fat (SNF) are vital components in the structure of the Class 4b pricing formula. These parameters are reviewed periodically to assess how accurately they reflect actual cheese industry conditions. The cheese yield issue involves a significant number of complex and technical matters. Valid concerns were raised about the methodology that the Department used in arriving at prior calculations. A myriad of technical issues must still be resolved. In addition, gaps in key data sets must be addressed. The Panel does not feel appropriate and economically rational adjustments can be made to the cheese yield with key gaps in crucial data sets and a lack of consensus amongst industry leaders. Any decision at this time would incorporate a degree of subjectivity. Furthermore, such decision would prolong the long-term debate without providing a step towards long-term resolution.

The Panel recommends the following changes be made within California's Class 2, 3, 4a and 4b milk pricing formulas:

- Increase the butter manufacturing cost allowance from $0.1320 per pound to $0.1560 per pound.
- Increase the manufacturing cost allowance for nonfat dry milk from $0.1500 to $0.1520 per pound.
- Decrease the manufacturing cost allowance for Cheddar cheese from $0.1750 to $0.1710 per pound.
- Remove the whey factor (from the Class 4b milk pricing formula specifically).
- Remove the commodity price floors and the "higher of" concept.
- Decrease the butter f.o.b. price adjuster to -$0.0285.
- Decrease the cheese price adjuster to -$0.0290.
- Maintain current cheese yield and test values at 10.2 @ 3.72% fat, 8.80% SNF.
- Maintain current Class 2 and 3 pricing formulas allowing for recommended adjustments to the Class 4a prices to "pass through" into Class 2 and 3 prices.

INTRODUCTION, SUMMARY OF PROPOSALS AND WITNESSES

California Food and Agricultural Code Section 61801, *et sec*., provides the authority, procedures, and standards for establishing minimum farm prices by the California Department of Food and Agriculture (Department) for the various classes of milk that handlers must pay for milk purchased from producers. These statutes provide for the formulation and adoption of Milk Stabilization and Marketing Plans for Market Milk (Plans).

In addition to the proposals in the petition:

1. Land O'Lakes (LOL) on Classes 4a and 4b

Six alternative proposals were submitted by the January 4, 2005 deadline:

2. Milk Producers Council (MPC) on Classes 4a and 4b
3. California Dairy Campaign (CDC) on Class 4b
4. Western United Dairymen (WUD) on Classes 4a and 4b
5. California Dairies, Inc. (CDI) on Class 4a
6. Alliance of Western Milk Producers (Alliance) on Classes 4a and 4b
7. Dairy Institute of California (Institute) on Classes 4a and 4b

Table 1 outlines the proposed changes in the Class 4a and 4b pricing formula components in contrast to the current pricing formulas.

Table 1: **Summary of Proposed Changes to Class 4a and 4b Pricing formulas with estimates of price impacts for the five-year period January 2000 to December 2004.**

	Current	LOL	MPC	CDC	WUD	CDI	Alliance	Institute
Cost Allowances - ¢/lb								
Cheese	17.50¢	17.34¢		16.34¢			17.10¢	17.34¢
Whey	17.00¢	25.90¢	18.00¢	15.90¢			17.00¢	26.75¢
Butter	13.20¢	13.21¢				15.70¢	15.70¢	13.21¢
NFDM	15.00¢	15.51¢				16.50¢		15.51¢
fob Adjuster - ¢/lb								
Cheese	3.21¢	2.87¢	2.34¢		1.85¢		2.32¢	2.87¢
Butter	3.32¢	3.14¢	3.06¢		3.50¢	3.15¢	3.15¢	3.14¢
Yields and Tests								
Cheese	10.20	10.00		10.92			10.20	10.05
Fat	3.72%	3.65%		3.94%			3.67%	3.67%
SNF	8.80%	8.78%		8.95%			8.93%	8.75%
Prices - $/cwt								
Class 2 3 4a		-$0.04	$0.01		-$0.01	-$0.23	-$0.10	-$0.04
Class 4b		-$0.57	$0.07	$0.91	$0.14		$0.12	-$0.63
Pool		-$0.27	$0.04	$0.41	$0.06	-$0.09	$0.01	-$0.29

A total of 17 witnesses testified including the Department's witness:

Cheryl Gilbertson — CDFA
*James Gruebele — LOL
*Geoffrey Vanden Heuvel — MPC
Xavier Avila — CDC
*Scott Magnuson - CDC

Andy Zylstra — CDC
*Michael Marsh — WUD
Richard Cotta — CDI
*Joe Heffington — CDI
*Jim Tillison — Alliance
*William Schiek — Institute
C. K. Venkatachalam — Leprino Foods, Inc. (Leprino)
*Mike McCully — Kraft Foods (Kraft)
*Benjamin Yale — Continental Dairy Products Inc. (Ohio, Indiana, Michigan, producers) and Select Milk Producers Inc. (California, New Mexico, Texas, Oklahoma, Kansas, producers)
*Patricia Stroup — Hilmar Cheese Company (Hilmar)
*Scott Hofferber — Farmdale Creamery (Farmdale)
Sharon Hale — Crystal Cream & Butter (Crystal)
*Sue Taylor — Leprino

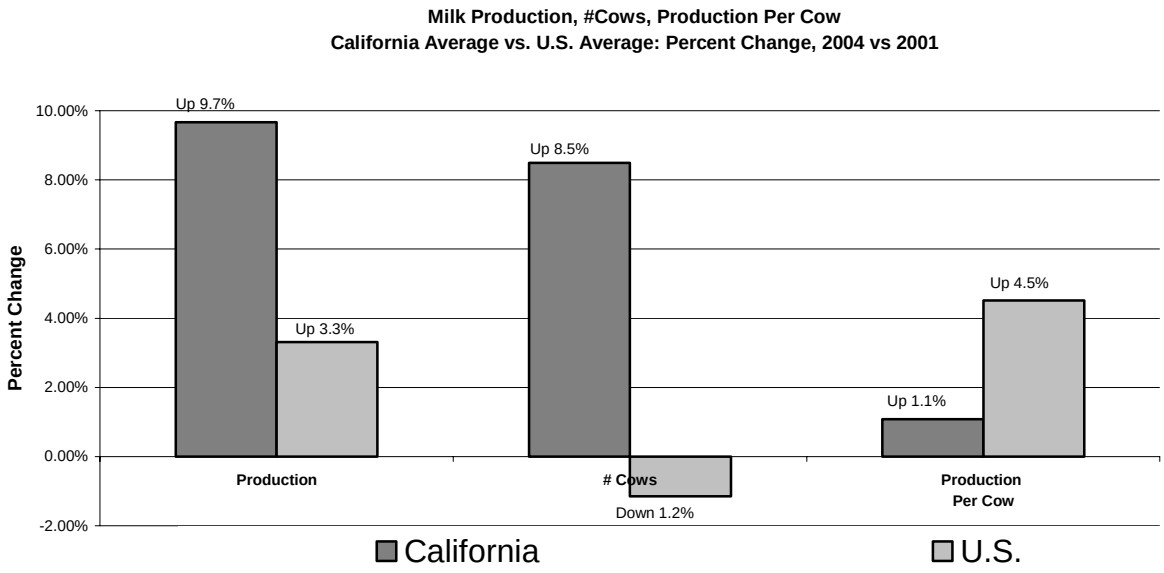
"*" indicates witness/organization who submitted a post hearing brief.

Background: California's Dairy Landscape

The following economic data and statistics represent the current situation of California's dairy industry and were considered when examining and evaluating the proposals and testimony submitted at the hearing.

California Milk Production

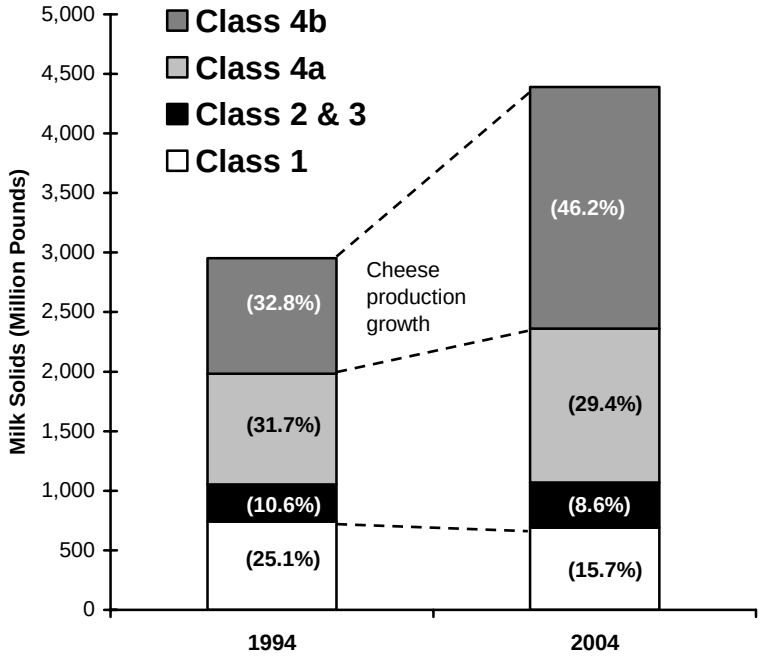
- Annual milk production has increased at an average rate of 4.5% over the last 20 years; 3.8% over the last 10 years.
- For 2004, milk production reached an all-time high of 36.4 billion pounds, with eight of the 12 months in 2004 exceeding 3 billion pounds in milk production.
- The last four months of 2004 showed an overall average increase of 5.1% in milk production, compared to the same period in 2003.
- Trend of increasing milk production over the last 20 years:
  - Above 9% - 3 years
  - 5 to 8.9% - 4 years
  - 3 to 4.9% - 7 years
  - 1 to 2.9% - 5 years
  - Less than 1% - 2 years
  - No years recording decrease in milk production
- The last two rounds of the Cooperatives Working Together (CWT) herd retirement program in California eliminated 38 dairies, 21,516 cows, and 429.3 million pounds of milk.
- Despite the impact in California of the CWT's program and the 2002-2003 low farm milk prices, since 2002 milk production in the State has increased by 1.6 billion pounds.
- Following the trend of the last 20 years, milk production could grow between 3.7 and 4.6 percent per year over the next 5 years. This means that by the year 2010, annual milk production in California would be between 45 and 47 billion pounds.



Milk Cows

- Annual California cow numbers have *increased* at an average rate of 3% over the last 20 years; 3.5% over the last 10 years – while U.S. cow numbers have *decreased* over the last 10 years
- California has more dairy cows and produces more milk than any other state, yet ranks 5th in milk production per cow, and 8th in total licensed dairies
- Over the last 5 years, the number of dairy cows increased by 293,000 cows
- Despite the CWT herd retirement program and low farm milk prices in 2002 and 2003, the number of dairy cows have increased 43,000 since 2002

Use of Total Pool Milk Solids in California by Class, 1994 vs. 2004



Cheese Production (Class 4b)

- In 2004, 46% of California's total milk production was used to produce cheese
- California cheese production set a record in 2004, at 1.95 billion pounds
- California share of U.S. cheese production increased to 22.5% (up from 14% in 1994)
- California cheese production has more than doubled in the last 10 years

Butter and Nonfat Dry milk Production (Class 4a)

- In 2004, 30% of California's total milk production was used to produce butter and nonfat dry milk
- California is ranked first in the U.S. for butter and nonfat dry milk production, with U.S. market shares of 32.3% and 53% respectively
- Butter has shown an 11% growth in production over the last 10 years to 383 million pounds in 2004
- Nonfat dry milk has shown a 75% growth in production over the last 10 years to 751 million pounds in 2004

Cottage Cheese, Yogurt, Ice Cream, as well as other soft and frozen dairy products (Class 2 and 3)

- Frozen dairy product growth has been flat over the last 10 years, actually decreasing 6% from 2003 to 2004; with an overall decrease of 3% over the last 5 years
- Dry curd cottage cheese production has decreased 31% over the last 10 years; 25% over the last 5 years
- Yogurt production decreased 5.7% from 2003 to 2004

Class 1 Sales

- California's share of U.S. population is approximately 12%, California's share of U.S. milk production is 21.3%
- Class 1 sales were down 1.2% comparing 2004 to 2003
- Only 15.7% of California's milk production was used to produce fluid milk products, down from 19% just three years ago

Cost of Producing Milk

- For January-July 2004, the cost of producing milk increased in all four areas of the state when compared to the same period in 2003, with statewide costs up an average of 1.65 percent.
- Comparing costs to the same period in 2003, the North Coast and North Valley areas had the largest increase in the cost of producing milk from January-July 2004, at 5.15% and 3.27% respectively.

Mailbox Milk Prices

- Comparing mailbox milk prices for the period January-July 2004 to the same period in 2003, prices were up an average of $4.61 per hundredweight, a 44% increase.

Background issue: California Class 4a and 4b prices relative to Federal Milk Order Class IV and III prices.

While the following discussion does not relate to a Hearing issue that requires Departmental action, it was the focus of considerable attention and testimony. The following review will be helpful in (1) understanding the Panel's consideration of the issue and (2) serving as a foundation for the Panel's recommendations.

Producer and processor representatives routinely debate the differences between California's Class 4a and 4b prices compared to federal order Class IV (milk used for butter/nonfat dry milk) and Class III (milk used for cheese) prices. In general, producer representatives advocate eliminating or narrowing the gap between the California and federal order prices for reasons of producer equity. Dairy processor representatives advocate maintaining or expanding the gap between the California and federal order prices for competitive reasons.

A major difference between the federal milk marketing order and California's milk marketing system is the ability of manufacturing processors (cheese, butter/nonfat dry milk plants) to de-pool in the federal system. Whenever the processing plants voluntarily elect to de-pool in the federal system, the plants are not required to pay the minimum Class III or IV prices established by the federal milk marketing order. This authority is granted to proprietary processors and the election time can be well after the minimum Class III, IV prices, and the federal order pool blend prices are announced. California statutes provide no similar flexibility; all Grade "A" milk purchased by processors, whether the manufacturing plant operates within the pool or separately from the pool (de-pooled), must purchase the milk at state established minimum Class 4a or 4b prices.

Kraft, which operates processing facilities across the nation in both federal milk marketing orders and in California, testified to the inherent disadvantage that California processors must compete with due to this difference in pricing structure. Kraft went on to testify that manufacturing plants, particularly cheese plants, operating in federal orders contract with dairy farmers to pay the federal order blend price. Whenever the federal order Class III price exceeds the federal order blend, the plant de-pools and pays the lower federal order blend to purchase the bulk milk.

The Panel examined the producer price data in the Pacific Northwest Federal Order during those occasions that the federal Class III price exceeded the order's blend price. The data demonstrated that when the price relationship favored de-pooling, dairy farmers received at most the blend price.

Comparison of the California Class 4a and 4b prices to the federal order Class IV and III is inappropriate if processors operating in federal orders are not required to pay the federal order prices. Based on the hearing testimony of various witnesses, most manufacturing plants operating in federal orders enter contracts with dairy farmers to pay the federal order blend price. Setting aside all other economic factors, a more appropriate comparison of farm milk prices between the California and the federal order systems would logically contrast California's Class 4a and 4b price with the federal order blend price.

If the California system allowed processing plants to de-pool, then it would be more appropriate to compare the milk prices between the two systems. Even if the issue of de-

pooling were ignored, different supply/demand patterns and market structure between California and a particular federal order, would exert economic pressure on the relative milk price levels. California's 20-year trend of expanding milk production, lower production costs, greater distance to national markets, and the continuing need to increase processing capacity relative to expanding production is quite opposite the economic conditions in most federal milk marketing orders. While the Upper Midwest is often cited as comparable, this region has had a historical overcapacity of processing facilities relative to its total production. Moreover, this region's production growth has historically been far below most Western milk producing regions.

Comparing California's minimum prices with a production region in the U.S. that is more similar in market characteristics is a more appropriate comparison. The Idaho milk production region is more directly comparable to the California market than most federal order areas. Consequently, a comparison of California's Class 4a and 4b prices with the Idaho market would be more appropriate than with the federal order blend price. Unfortunately, the farm milk prices that Idaho processing plants pay to purchase milk for use in butter, nonfat dry milk and Cheddar cheese products are not published or made public.

In addition to production costs versus minimum milk prices, rate of production increase, total milk supply, the state's plant capacity, combined with other relevant economic factors, the Department's manufacturing cost study data has been one of the key considerations in the establishment of minimum Class 4a and 4b milk prices. The cost studies are based on the California plant operations providing the most accurate and most applicable data of the processing conditions unique to California. The federal milk marketing order system does not perform similar cost studies of manufacturing plants to compile processing costs. Thus, other than the California manufacturing cost studies that are routinely made a part of the federal milk marketing order hearing record, the federal system must depend upon the testimony and evidence of industry participants (each with their own vested financial interest), to base adjustments of manufacturing cost allowances in their pricing formulas.

The Panel recognizes the gap between the California Class 4a and 4b prices relative to the corresponding federal order Class IV and III prices. The size of the gap is not the focus or objective of the Panel. The Panel believes it is more important to set as accurate a pricing formula as possible that reflects full consideration of all the key economic factors impacting the California milk market. An accurate pricing formula would consider among other relevant economic factors: milk production costs, milk supply, manufacturing costs, product yields in converting bulk milk into finished products, markets for California commodities, transportation costs, the competitiveness of California commodities compared to other major supply regions, the prices received by California processors for the finished commodities, the state's processing capacities, etc.

ANALYSIS AND DISCUSSION OF CLASS 4A AND 4B PRICING FORMULAS

Manufacturing Cost Allowances in Class 4a and 4b Pricing Formulas

Issue

This section of the Panel Report speaks only to manufacturing cost allowances for butter, nonfat dry milk, and Cheddar cheese. The manufacturing cost allowance for dry skim whey is addressed separately in the section following.

California's end-product pricing formulas start with the wholesale prices for Grade AA butter, nonfat dry milk, and Cheddar cheese and subtract a manufacturing cost allowance to determine the value (price) for milk. In order to establish the manufacturing cost allowance for the Class 4a and 4b pricing formulas, the Department conducts annual manufacturing cost studies to ascertain processing costs for butter, nonfat dry milk, and Cheddar cheese. The Department has a long standing history of relying on the audited processing cost study data combined with the relevant economic supply/demand factors to establish the manufacturing cost allowances for butter, nonfat dry milk, and Cheddar cheese.

Once the Department establishes the manufacturing cost allowances for the three commodities, they remain in the pricing formulas until they are amended via a public hearing. At public hearings, interested parties are provided an opportunity to provide testimony and evidence regarding the audited manufacturing cost data and any relevant economic factors that should be considered in evaluating the appropriate level of the manufacturing cost allowances.

In November 2004, the Department released a summary of the manufacturing cost studies for the period January through December 2003. In December 2004, the Department released a document that adjusted those cost studies by updating the utility costs for September 2004 and updated changes in wages, payroll taxes, and fringe benefits for 2004. The processing costs do not include the raw product cost of milk nor do they include any cost of marketing the finished product.

Review of Proposals

In prior hearings on the Class 4a and 4b pricing formulas, the level of the manufacturing cost allowance was often the most contentious issue. The diversity of testimony offered by producer and processor interests varied widely. This disparity of testimony was absent at the February 2005 hearing.

As reflected in Table 2 seven formal proposals were submitted to adjust the manufacturing cost allowances. The amount of differences between the proposals was surprisingly narrow compared to prior manufacturing cost hearings. With the exception of butter, the difference between the highest and lowest proposal was 1.5 cent or less. Even the proposals for butter were focused on two areas, 13.20/13.21 cents and 15.7cents.

Table 2: **Summary of Proposed Manufacturing Cost Allowances for Butter, Non fat dry milk, and Cheese**

	Butter	NFDM	Cheese
CDI	$0.1570	$0.1650	n.a.
Current	**$0.1320**	**$0.1500**	**$0.1750**
WUD	$0.1320	$0.1500	$0.1750
MPC	$0.1320	$0.1500	$0.1750
Institute	$0.1321	$0.1551	$0.1734
LOL	$0.1321	$0.1551	$0.1734
Alliance	$0.1570	n.a.	$0.1710
CDC	$0.1320	$0.1500	$0.1634

Impact of Proposals

The proposals' impacts are given in Table 3. The changes proposed by CDI and the Alliance would have resulted in the largest decrease in Class 2, 3, and 4a prices. Class 4a prices would have decreased by 10 and 24 cents per cwt, respectively. The manufacturing cost allowance proposed by Institute and LOL would have resulted in the largest decrease in Class 4b prices. The class 4b prices would have decreased by 55 cents and 49 cents per cwt, respectively. The changes proposed by CDC would have resulted in an increase of 17 cents per cwt.

Table 3: **Summary of Five Year Average Change in Class 4a and 4b Prices resulting from Proposed Manufacturing Cost Allowances, January 2000 to December 2004.**

Classes 2 3 4a		Class 4b	
	($/cwt)		($/cwt)
WUD	$0.00	CDC	$0.17
MPC	$0.00	WUD	$0.00
CDC	$0.00	CDI	n.a.
Institute	-$0.04	MPC	-$0.04
LOL	-$0.04	Alliance	-$0.10
Alliance	-$0.10	LOL	-$0.49
CDI	-$0.24	Institute	-$0.55

Discussion

Consistent with prior hearing decisions, the Panel adheres to the Department's historical policy of establishing manufacturing cost allowances that are consistent in volume coverage among butter, nonfat dry milk and Cheddar cheese.

The Panel does not pre-select a specific percent volume that must be covered by the manufacturing cost allowance. As a general rule, the acceptable level of coverage ranges from 50 to 80 percent of the product processed. More precision on the volume of product covered depends on the actual cost studies and how the plants and their volume rank. Since individual plants have varying volumes with distinctly different manufacturing costs, it is typically not possible to cover a specific volume. Covering one additional processing plant may raise the volume covered from 60 % to 80% or 85%, depending on the commodity.

In reviewing the volumes associated with various proposals, the Panel finds that the CDC's manufacturing cost allowance proposal for Cheddar cheese would cover about 30% of the state's cheese volume, which is too low. On the other hand, the proposal by CDI for butter and nonfat dry milk would involve covering about 90% of the state's butter volume and 88% of the state's nonfat dry milk volume, which is too high.

As is evident in the background material on the California dairy landscape, the Panel recognizes that there is a positive correlation between mailbox prices (prices farmers actually receive) and the cost of milk production. Given the historical pattern of increasing cow numbers and milk production, and despite the pessimistic outlook of some producer witness testimony, the Panel believes California milk supplies will continue to expand. Thus far there has been no evidence to the contrary.

The growing milk supplies are increasingly being utilized in Class 4a and 4b usages. The amount of milk actually being used for Class 1, 2, and 3 are somewhat constant. The Class 1 usage is actually decreasing. These economic factors support the importance of maintaining a viable cheese, butter and nonfat dry milk industry if California is to handle its growing milk supply.

The Panel is cognizant that the California price must be set at a level that will help ensure that California's production will clear the market. If milk production cannot find a home within California, this can create economic pressure that could undermine the state established minimum prices.

The Panel is also cognizant of the competitiveness issue that California manufactured products must contend with in the national market. Labor, energy, and generally higher costs of doing business in California are economic handicaps that California butter/powder and cheese processors must overcome.

Adjusting the manufacturing cost allowances in a manner that treats both producers and processors equitably is a key policy goal. As a result, an increase to the butter and nonfat dry milk manufacturing cost allowance is cost-justified, just as a decrease in the Cheddar cheese allowance is cost-justified. While the Panel cannot predict what the future holds, we are mindful of matching plant capacity with milk supply. The Panel is also confident that the Department will annually update the manufacturing cost studies and will expeditiously hold subsequent hearings to make appropriate adjustments when economic conditions warrant change.

Panel Recommendations

We find that the current manufacturing cost allowance for butter and nonfat dry milk is too low relative to the volume of product covered. The Panel recommends:

- increasing the butter manufacturing cost allowance from $0.1320 per pound to $0.1560 per pound, which covers approximately 65% of the butter processed in the state
- increasing the allowance for nonfat dry milk from $0.1500 to $0.1520, which covers approximately 67% of the nonfat dry milk processed in the state
- decreasing the allowance for Cheddar cheese from $0.1750 to $0.1710, which covers approximately 79% of the Cheddar cheese processed in the state

Whey Manufacturing Allowance of the Class 4b Pricing Formula

Issue

The Department implemented an explicit pricing component for the value added products derived from the skim whey stream following the January 2003 hearing. The pricing component was designed to reflect the value associated with further processing of skim whey.

Contrary to the typical procedure used for butter, nonfat dry milk, and Cheddar cheese, the Department had not completed audited cost studies on dry skim whey products prior to the January 2003 hearing. As a result, there was no audited manufacturing cost data available on which the Department could rely. Consequently, only the testimony and evidence in the 2003 hearing record that was submitted by hearing participants was available.

In April 2004, the Department released a summary of skim whey powder processing costs for selected periods between January 2002 and October 2003. The cost studies reflected the weighted average costs of the four plants studied was higher than the current allowance of 17 cents per cwt. In fact, none of the audited cost studies reflected costs as low as the 17 cent level.

Review of Proposals

CDC proposed that the manufacturing cost allowance be decreased from 17 cents to 15.9 cents. WUD and the Alliance proposed that the manufacturing cost allowance for dry skim whey remain unchanged from the current level. MPC proposed that the allowance be increased by one cent to 18 cents. LOL proposed that the allowance be increased to 25.8 cents, while the Institute proposed that the allowance be increased to 26.75. Additionally, four proposals were submitted which would prevent the skim whey component from negatively impacting the minimum Class 4b price (accomplished via the introduction of a snubber). Two proposals would allow the current pricing formula to reflect the positive and negative values into the pricing formula as is currently the methodology.

Table 4: **Alternative Parameters for Dry Skim Whey Factor in the Class 4b Pricing Formula, with impact on Class 4b price**

Organization	Allowance (¢/lb)	Snubber	Impact on Class 4b ($/cwt)
CDC	15.90¢	Yes	$0.07
WUD	17.00¢	Yes	$0.02
Alliance	17.00¢	Yes	$0.02
Current	***17.00¢***	***No***	***n.a.***
MPC	18.00¢	Yes	-$0.02
LOL	25.80¢	No	-$0.51
Institute	26.75¢	No	-$0.56

Impact of Proposals

It is difficult to break down accurately the impact of the multiple changes in the pricing formulas. The proposed changes in the dry skim manufacturing cost allowance and the incorporation of a snubber for dry skim whey combined with other proposed changes to the Class 4b pricing formula: f.o.b. price adjuster, yield, removing the support purchase price, etc. Table 4 approximates the impact of just the two factors regarding skim whey.

Discussion

As was reported in the January 2003 hearing determinations, the incorporation of a pricing component to the Class 4b pricing formula to reflect the value that cheese operations earn from their skim whey stream (the residual of cheese production) has not been easy or straightforward.

The skim whey stream has historically been a waste by-product of the cheese making process. As the cheese industry has matured and environmental regulations have become more stringent, the development of whey by-products have become more commonplace by necessity. Still the investments required to process skim whey stream into valued-added products are significant and the financial risks for processing the whey stream into a value-added product are considerable.

Whey is one of the biggest reservoirs of food protein and can be made into a wide variety of both food and non-food products. In the food category it can be used in baby food, diet supplements, bakery products, salad dressing, beverages, and confections. It can be made into pharmaceutical products, yeast products, and industrial products. Unlike Cheddar cheese, butter, and nonfat dry milk which have defined standards of identity and fairly uniform processes, each of these whey usages require their own unique processing equipment, processing procedures, with vastly different associated costs. While economies of scale are critical in successful whey operations, the Panel is mindful that an inappropriate decision on this factor can inadvertently make previously profitable whey enterprise a losing proposition should it over stimulate the production of a particular whey product.

Prior to January 2003, California dairy stakeholders had held sharply contrasting views on which whey usage should be used in the Class 4b pricing formula. However, the widespread consensus of the testimony from the January 2003 hearing was that dry skim whey was the appropriate whey by-product.

Dairy processors have long been opposed to explicitly incorporating whey value in the Class 4b pricing formula. At the January 2003 hearing, however, the processor witnesses testified that the adjustment to the f.o.b. price adjuster could be modified slightly to reflect the positive contributions of skim whey stream. While processor witnesses at the January 2003 hearing testified in favor of reducing the f.o.b. cheese price adjuster from 3.21 cents per pound to 0.8 cents per pound, there was no real objective basis for determining whether the level was sufficient or appropriate. The proposal was somewhat subjective, arbitrary, and without sufficient rationale as to the manner in which it had been determined. The processor proposal was not adopted. Furthermore, it undercut the established basis for establishing the f.o.b. California price adjusters:

f.o.b. Price Adjuster = California Price – Chicago Mercantile Exchange Price

Adoption of processor proposal raised some very significant policy problems for the Department. On what objective or factual basis would future determinations relative to the appropriate level of this modification be established? The Panel was very uncomfortable with the idea of incorporating such a subjective component in the pricing formulas. Furthermore, the Panel was mindful that future hearings would be required to consider this subjective component at all future Class 4b pricing hearings.

The Panel was far more comfortable in recommending the adoption of a whey component which would be determined via objective cost study data on whey processing costs. The consensus of the Panel members was that methodology would be far more objective than the concept proposed by the processors. Moreover, this procedure would be consistent with the long established process used in the price determinations of butter, nonfat dry milk and Cheddar cheese.

Since there was no available processing cost study data on dry skim whey, the Panel relied on the testimony and evidence presented during the January 2003 hearing. Much of the evidence and testimony was based on evidence presented during previous federal order hearings, or budgeted financial information. The Panel was concerned that much of the cost information presented during the hearing could not be verified or validated by the Department's own manufacturing cost studies. The Panel's concern was offset by the knowledge that manufacturing cost studies would be completed within a year. In the interim, the Panel established a manufacturing cost allowance that was set at 2 cents higher than the nonfat dry milk manufacturing allowance to offset the higher processing costs.

Considerable testimony and evidence at the February 1 & 2, 2005 hearing was focused on the manufacturing cost studies for dry skim whey. The fact was that the Department's cost studies of four whey operations reflected higher processing costs than the current 17 cents.

Additionally, producer criticisms of Department's survey of the California whey cost exhibit included:

- Difference between manufacturing of dry skim whey from Cheddar cheese versus mozzarella cheese.
- Inconsistencies with National Cheese Institute study (MPC) or International Dairy Foods Association (Alliance) on whey costs performed in 1999 which reflected 15.9 cents per lb.
- Data from West Farm Foods and Tillamook Creamery entered data that showed their costs are less than 17 cents
- Some producers do not believe that the Department's survey reflects reasonable manufacturing costs for processing Cheddar cheese whey into dry skim whey.

The hearing record and particularly the testimony of Leprino provided ample evidence that the processing of skim whey from all cheese varieties are virtually the same. The difference noted by Leprino was less than 1/2 cent per pound.

The cost data cited by various witnesses in the federal order hearing were largely based on data that were not verified or audited by a third party. While the Department cannot provide complete assurance over the accuracy of its manufacturing cost studies, in the judgment of the Panel the cost study data via an independent review is far more reliable and accurate.

The Panel is cautious about the reliability of information and data that is provided by organizations that largely operate outside California and compete with California processing firms. It is reasonable to assume that out-of-state dairy processing companies will gain competitive benefits in the marketplace, whenever the regulated prices on California processors are required to pay a higher regulated minimum price.

The 1990 Cornell University study on whey powder production technology, costs, and profitability indicted that:

- whey powder varied widely among plants of different sizes and different production schedules;
- the costs of whey powder varied from 7.9 to 25.9 cents per pound depending on the volume and capacity of the plant
- plant size was by far the most important factor affecting unit costs of production in the model plants;
    - the unit costs of a Cheddar cheese plant receiving 2.4 million pounds of milk a day were more than 30% lower than a whey product plant associated with Cheddar cheese operation that had a daily capacity to handle 960,000 pounds of milk;
- whey powder manufacturing costs are rather sensitive to differences in wage rates, initial capital investments levels, and utility rates because labor expense, the cost associated with the level of capital investments, and utility expenses are such important cost components.

The Panel reviewed the following confidential whey cost information and took into account:

- the size of the plants involved,
- the wide diversity of plants,
- California's capital, utility, and labor costs are generally higher than most other production areas.
- the audited cost data is consistent with the general parameters of the Cornell University's study
- a comparison of California dry whey costs to California nonfat dry milk costs for plants of similar size
- cost figures generated by one of the four dry whey plants significantly differed from the sample's mean. This plant distorted the entire data set's weighted average cost and volume covered

After reviewing the information, the Panel believes the Department's cost studies on dry skim whey are accurate, reliable, and consistent with the parameters of the Cornell study.

The producers would have the Department discount its own cost studies data and maintain the current 17 cent manufacturing allowance. It is a significant concern to the Panel that the current

allowance does not cover even one of the California manufacturing plant costs for converting their whey stream to dry skim whey. The manufacturing cost study results have served the Department and stakeholders well for over 25 years in guiding the process of establishing appropriate manufacturing cost allowances and serve as the basis for updating those allowances. Ignoring the cost data would not be consistent with the purpose of the statutes nor with the manner in which the manufacturing cost allowance is established for Cheddar cheese, butter, and nonfat dry milk.

The producer testimony to discount the manufacturing cost data entirely places the Department in the same policy dilemma as the processor's suggestion to simply modify the CME cheese price adjuster in the 2003 hearing. Both the processor proposal at the January 2003 hearing to modify the f.o.b. price adjuster and the producer proposal at the February 2005 hearing to ignore the Department's cost data would implement policy without objective foundation for the determination. More importantly, implementation of this concept will ensure that future adjustments to the manufacturing cost allowance for dry skim whey will be more subjective and arbitrary. The Panel is not comfortable in having to make such subjective determinations from one hearing to the next.

The concept proposed by producer representatives to implement a price floor (snubber), below which the whey factor cannot drop, greatly magnifies the problem. By implementing this provision the Class 4b price could not reflect the negative values when the commercial price of dry whey falls below the cost of manufacturing. This policy could create serious competitive disadvantages to California cheese products.

The Panel is mindful of using a manageable pricing formula. It seems clear from the positions taken by producer/processor witnesses that incorporating a factor for the value of the whey stream appears to be intractable. Given the testimony and evidence before the Panel, it would be far wiser to simply remove the skim whey factor from the Class 4b pricing formula than to continue to expand this factor in an inconsistent manner with the butter, and nonfat dry milk and Cheddar cheese pricing formulas.

Panel Recommendation

The Panel recommends that the whey factor in the class 4b pricing formula be removed.

Federal Support Purchase Prices as Price Floors

Issue

The federal government has established an indirect safety net for all milk prices (unregulated, state systems including California, and federal order systems) by maintaining a federal price support program. The federal government, via the Commodity Credit Corporation (CCC) stands ready to purchase butter, nonfat dry milk, and Cheddar cheese at established support prices that were designed to allow processors to pay producers pre-determined target milk prices. The U.S. Congress has set the target price at $9.90 per cwt. of milk testing 3.67% fat. The operational mechanics of this federal

price support, however, only establishes a “soft” floor, and milk prices do fall below the designated target price.

The federal support price is not directly incorporated into the federal milk marketing order pricing formulas. The established federal order prices can and do fall below the federal target support price for milk. In contrast, California’s pricing formulas currently use the higher of the commodity support purchase prices or wholesale prices for Grade AA butter, block Cheddar cheese, and nonfat dry milk. These support purchase prices are currently set at $1.05, $1.1314, and $0.80 respectively per pound of Grade AA butter, block Cheddar cheese, and nonfat dry milk.

Impact of Proposals

Testimony was received both in support and in opposition to the removal of the commodity price floors. The alternative proposals presented by MPC, WUD, and the Alliance all favored maintaining the commodity support purchase prices as floors. Several witnesses testified to the vital importance of the farm safety net. Witnesses representing the Institute, Leprino, Hilmar, and Farmdale all provided opposing testimony to the price floors. They argued that the federal support price program is a national problem. A national problem should be properly fixed at the federal level not at the state level. California’s incorporation of the price floor places the costs of a federal dairy price support program squarely on the shoulders of California processors. California processors are being asked to guarantee a market value for butter, nonfat dry milk, and Cheddar cheese that is not guaranteed under the federal milk marketing order program.

Table 5 lists the difference over the last 21 months between the CME commodity price and the respective commodity support purchase price for Cheddar cheese and Grade AA butter. For nonfat dry milk, the table lists the difference between the California weighted average price and the commodity support purchase price. It is also worth noting that since April 2003 (when the commodity price floors were incorporated into California’s milk pricing formulas), they have only been used during one month for Cheddar cheese as is evidenced by only one negative number in the table. Between April 2003 and December 2004, all other commodities had market prices that exceeded their respective federal support purchase prices. This data confirms that the current price floors have been triggered infrequently, given current market conditions.

(See table on next page)

Table 5: **CWAP and CME Prices less Commodity Support Purchase Prices**

all figures are in cents per pound

Year	Month	Nonfat Dry Milk	Grade AA Butter	Cheddar Cheese
2003	April	0.21¢	4.17¢	-1.78¢
	May	0.08¢	3.88¢	1.17¢
	June	0.23¢	6.04¢	3.35¢
	July	0.31¢	13.33¢	33.41¢
	August	0.16¢	13.35¢	46.44¢
	September	0.34¢	11.52¢	46.86¢
	October	0.53¢	13.29¢	46.86¢
	November	0.93¢	14.98¢	29.74¢
	December	0.55¢	24.56¢	21.39¢
2004	January	0.23¢	32.43¢	17.15¢
	February	0.15¢	60.79¢	23.74¢
	March	0.38¢	107.75¢	61.25¢
	April	1.16¢	115.52¢	100.90¢
	May	2.18¢	104.58¢	93.20¢
	June	3.33¢	86.60¢	63.34¢
	July	3.56¢	73.18¢	29.65¢
	August	4.37¢	51.30¢	43.22¢
	September	4.57¢	68.69¢	43.46¢
	October	4.76¢	63.63¢	38.60¢
	November	4.78¢	80.58¢	52.99¢
	December	6.63¢	72.05¢	50.83¢

Discussion

Price floors create an artificial price within a market at a level that may be higher than the naturally occurring market price. Price floors are advocated for by sellers who have something to sell and feel that the market price is inequitable. California's dairy producers are no exception. However, the Panel must balance the producers' need for a fair and equitable milk pricing system and the processors' need to remain competitive within national and international commodity markets.

From 1973 to 1995 and 2003 to present, the commercial prices for Grade AA butter and nonfat dry milk were floored by their respective support purchase prices in California's pricing formulas. However, since it was first used in 1989, the pricing formula for cheese had never been floored by the Cheddar cheese support purchase price until 2003.

The practice of having a price floor for butter and nonfat dry milk was eliminated from the formulas in 1995 because the dairy support program was scheduled to terminate. However, the dairy price support program was not terminated. The policy objective to stabilize producer income via the federal support purchase program must be balanced against the background that the federal government has sought a reduction in the role of this program. Care and caution must be exercised when seeking realization of this objective under the uncertainty of the federal support purchase program's existence into the future.

Even with the support purchase prices as price floors, neither the California Class 4a and 4b prices nor the federal Class III and IV prices are guaranteed to be at or above the $9.80 per hundredweight target support price. Table 6 shows various class prices when butter, nonfat dry milk, and Cheddar cheese are at their support purchase prices of, respectively, $1.05, $0.80, and $1.13, with skim whey powder at $0.18 per pound. For comparison at a standardized milk test and not the 3.67% fat at which the support price is announced, the $9.80 per cwt. target price has been prorated to 3.5% fat.

Table 6: **Comparison of Minimum Prices when Commodity Prices are set equal to Support Purchase Prices**

($/cwt)

	Support Price		Federal		California	
	@ 3.67%	@ 3.5%	Class III	Class IV	Class 4b	Class 4a
Current formulas	$9.90	$9.80	$9.85	$9.61	$9.41	$9.37

Commodity support purchase prices have two components: a return to manufacturing plants (manufacturing cost allowance) with the residual value being the price dairy farmers receive. Some of the disparity between the $9.80 per cwt. target support price and the prices calculated in Table 6 stems from the federal government not making changes to the manufacturing cost allowance to reflect the additional costs associated with selling to the CCC.

More importantly, as previously stated, federal milk pricing formulas do not incorporate federal support purchase price as price floors. If the federal order pricing program is not revised on a comparable basis, then over the long term, the continued use of the federal support purchase price as price floors in California pricing formulas could place California manufacturing plants at a competitive disadvantage in commercial markets nationwide.

The incorporation of the federal support price in California's pricing formulas, places California processors at a greater disadvantage during times of depressed commodity markets when competing for sales with unregulated processors on a national basis. In the long run, the continuance of the commodity support purchase prices as price floors within California's milk pricing formulas may further exacerbate this problem. The crux of this matter is that if California processors are prevented from competing for markets with processors located in other states, some California plants may decide to curtail their production of manufactured milk products. This will lead to inadequate manufacturing capacity within California. Without adequate processing capacity, California producers will be forced to consider other alternatives including, but not limited to, shipping milk out-of-state for processing, re-locating their dairy facilities out-of-state, and/or sending cows to slaughter (environmental regulations prevent the old approach of dumping milk). These alternative options will all individually and collectively reduce producers' welfare.

California's milk regulatory environment provides the flexibility needed during fluctuating economic times. Appropriate adjustments to the milk pricing formulas can be made within three months if economic conditions warrant. As such it is important to note that any significant economic changes within milk markets will merit expeditious consideration by the Department and industry stakeholders.

Panel Recommendation

The Panel recommends removal of the commodity price floors and the "higher of" concept within California's milk pricing formulas for Classes 4a and 4b.

F.O.B. California Price Adjusters

Issue

California depends on national markets and the common practice of purchasing finished products f.o.b. Class 4a and 4b price are adjusted to reflect the actual prices that California processors receive for the sales of their finished products. In the case of Class 4a, 3.32 cents per pound is subtracted from the Chicago Mercantile Exchange (CME) Grade AA butter price. In the case of Class 4b, 3.21 per pound is subtracted from the CME 40 pound block Cheddar cheese price.

In January 2005, the Department distributed a report that reflected the differences between the actual prices that California plants received and the CME prices for Grade AA butter and 40 pound block of Cheddar cheese. The report reflected sales data collected for the period November 2002 through October 2004. During this period the California Cheddar cheese processors and the grade AA butter manufacturers were getting 2.85 cents and 2.90 cents less per pound than the CME respectively. Thus pricing formulas were subtracting a larger adjustment than the plants were actually getting.

Review of Proposals

The Department received a total of six proposals recommending lowering at least one of the price adjusters; a seventh proposal called for the elimination of the Cheddar cheese f.o.b. price adjuster.

Table 7: **Summary of Proposed Changes to the California Price Adjusters for Butter and Cheese**
(Dollars per lb)

	Butter		**Cheese**
Current	***$0.0332***	***Current***	***$0.0321***
California Dairy Campaign	no change	California Dairymen, Inc.	no change
California Dairymen, Inc.	$0.0315	Land O'Lakes	$0.0287
Alliance of Western Milk Producers	$0.0315	Dairy Institute	$0.0287
Dairy Institute	$0.0314	Western United Dairymen	$0.0274
Land O'Lakes	$0.0310	Milk Producers Council	$0.0234
Milk Producers Council	$0.0306	Alliance of Western Milk Producers	$0.0232
Western United Dairymen	$0.0280	California Dairy Campaign	$0.0000

Impact of Proposals

The Department's analysis of the proposals to change f.o.b. price adjusters considered the impact to:

- the prices for Class 4a, Class 4b, Class 3, and Class 2 milk
- the pool prices
- the various California class prices relative to the comparable federal prices

Table 8 shows the impact the proposals would have had on minimum class prices and on pool prices. The analysis assumes that all other factors in the pricing formulas remain unchanged and that the proposals were in effect from January 2000 through December 2004.

Table 8: **f.o.b. Price Adjusters: Impact of Proposals on the Various California Milk Classes and Pool Prices Relative to the Current Pricing Formulas**

($/cwt)

		Classes 2 3 4a	Class 4b	Pool
CDC	Butter	n.a.	n.a.	n.a.
	Cheese	n.a.	$0.3407	$0.1514
WUD	Butter	-$0.0176	$0.0004	-$0.0032
	Cheese	n.a.	$0.1371	$0.0609
MPC	Butter	$0.0109	-$0.0006	$0.0046
	Cheese	n.a.	$0.0877	$0.0390
Alliance	Butter	$0.0071	-$0.0002	$0.0031
	Cheese	n.a.	-$0.0884	$0.0393
Institute	Butter	$0.0076	-$0.0003	$0.0032
	Cheese	n.a.	$0.0340	$0.0151
LOL	Butter	$0.0076	-$0.0003	$0.0032
	Cheese	n.a.	$0.0337	$0.0150
CDI	Butter	$0.0071	-$0.0004	$0.0030
	Cheese	n.a.	n.a.	n.a.

Discussion

The CME is the principal source of competitively determined prices for Cheddar cheese and Grade AA butter within the country. It serves as a reference point of comparison to the actual California Cheddar cheese and Grade AA butter prices that California plants receive. Since California processors do not routinely receive CME prices, f.o.b. price adjusters were introduced to equalize what out-of-state processors and California processors receive for their products.

Price Differential = California Price – CME Price

The hearing testimony regarding f.o.b. price adjusters revolved around two main issues:

a) the accuracy of the methods used to compile the data that reflects the difference between the actual prices that California plants received versus the CME prices, and
b) the current levels of the f.o.b. price adjusters.

Accuracy of the Methods Used

CDI testified that with respect to butter sales, it believed that the Department's survey was adversely impacted by:

- the use of a partial year time period (not a full calendar year – not a full market cycle) – CDI suggested that survey data be updated through December 2004,
- the price fluctuations during the study period led to lower calculated differences that were caused by a comparison of weighted average sales data to simple average index of CME prices,
- an error in the Departmental data, which would have changed the 24-month difference to 2.98 cents per pound,
- therefore, CDI suggested that a longer time period be used or they could support a 3.15 cent per pound adjuster in the butter pricing formula.

The concern raised by CDI with respect to the two full cycles is an interesting issue that has not been raised previously. Unfortunately, additional data to complete the calendar year 2004 was not possible within the confines of the hearing process. Broadening the data to include prior years can lead to adverse consequences for everyone connected to the California hearing process. Such price hearings might involve endless debates over which sets of data and time periods should be used. The hearings are difficult enough without interested parties routinely seeking such debates whenever the data is not supportive of their position.

The Panel also believes that by using the 24 months of data compiled by the departmental staff that two full cycles are being used. While the two cycles are not calendar year cycles, they provide the most objective information available on California's Cheddar cheese and Grade AA butter sales.

CDI testified that the best approach in estimating the relationship between monthly CME prices and monthly California prices is to take a simple average of the monthly differences between the two prices. Using a weighted average (weighted by product volume in a given month) would introduce bias into the estimator because there is no theoretical reason why one month's observation of the price difference should be more heavily weighted than another.

Absent more thorough information and data on both butter and cheese sales, and based on the underlying rationale, the Panel is inclined to support the notion that using the weights twice would introduce bias into the estimator. The Panel is willing to recommend that the Department hold stakeholder meetings to more fully discuss this issue if there is continued interest.

The Department checked the document in question and found a typographical error in the stated Butter Weighted Average price for October 2003, however the difference total was correct and thus the 24-month average data was verified to be correctly stated at 2.85 cents per pound.

CDI also suggested a method to improve the accuracy of the data collection. They suggested that the Department request information from National Agricultural Statistical Service (NASS) for their weekly sales data. The Department could tabulate the information on a weekly/monthly basis can be used as a check against the monthly data the Department compiles via its audit staff. The Panel recommends that this suggestion be further explored by the audit staff.

Current Levels of F.O.B. Price Adjusters

As mentioned earlier, the Department periodically evaluates the f.o.b. price adjusters in the 4a and 4b pricing formulas by comparing them against actual industry sales data. Once the Department establishes the f.o.b. price adjusters for Cheddar cheese and Grade AA butter, they remain in the pricing formulas until they are amended via a public hearing. The current f.o.b. price adjustment levels have been in effect since April 2003.

The Department's most recent pricing studies demonstrate that the current f.o.b. price adjusters exceed the actual difference between CME prices and the prices that California processors receive for their products. Table 9 demonstrates the fact that the current price adjusters require modification. The Panel's recommendations regarding the level of f.o.b. price adjusters were developed based on this data.

Table 9 **Actual Difference between CME Prices and the Prices Received by California Processors for Cheese and Butter between November 2002 and October 2004 (¢/lb)**

	Current f.o.b. Price Adjusters	Actual Average Difference (24 consecutive months)[1]
Butter	3.32¢	2.85¢
Cheese	3.21¢	2.90¢

[1]Simple average of the monthly price per pound received by each plant and then weighted by sales volume.

Panel Recommendation

The panel recommends changing the price adjusters in the 4a and 4b pricing formulas as follows:

a) Decrease the butter price adjuster to -$0.0285 per pound
b) Decrease the cheese price adjuster to -$0.0290 per pound

Yields

At the time of the February 1st and 2nd hearing, the Class 4 pricing formulas had five commodity yields. The yields convert commodity prices to component prices: directly for Class 4a and indirectly for Class 4b. At the hearing however, there were proposals to change only one of the five yields: the block Cheddar Cheese yield in the Class 4b pricing formula.

Issue

Cheese yield and vat tests for fat and solids–not–fat (SNF) are vital components in the structure of the Class 4b pricing formula. These parameters are reviewed periodically to assess how accurately they reflect cheese industry conditions. In November 2004, the

Department released its updated cost study exhibit that included summarized data for cheese yields and cheese vat tests in nine California Cheddar cheese plants (Hearing Exhibit 8b).

Review of Proposals and Analysis

The hearing record addressed a wide variety of cheese yields as part of the explanatory discussion. Only four specific proposals were presented however, as alternatives to the current yield (Table 10).

Table 10: **Alternative Block Cheddar Cheese Yields and Tests, with impact on Class 4b prices for the five years 2000 to 2004**

Witness	Yield @ Fat% SNF%	Class 4b Impact ($/cwt)
LOL **Van Slyke: CDFA all 2003 milk & Tong 9 non-cheese plants**	10.01 @ 3.67% 8.75%	-$0.11
Institute **Van Slyke: CDFA all 2003 milk & Tong 9 non-cheese plants**	10.05 @ 3.67% 8.75%	-$0.06
Alliance **Van Slyke: Tong all 13 plants**	10.20 @ 3.67% 8.93%	-$0.03
Current **Prorated in 2003 from 10.0 @ 3.65% 8.78%, which in turn was prorated in 1997 from 9.8 @ 3.6% 8.7%, which in turn was based in 1989 on average yields and tests**	10.20 @ 3.72% 8.80%	n.a.
CDC **CDFA exhibit**	10.92 @ 3.94% 8.95%	$0.38

Discussion

Many of the hearing witnesses base their arguments about the validity of the Department's current yield number (10.2 pounds of cheese per hundredweight of milk) on a theoretical model (Van Slyke Formula) developed to assist the cheese manufacturing plants with the management of their processing operations.

The theoretical model was designed as a measure of attainable in-plant efficiency for converting milk with given compositional properties to so many pounds of cheese. Using the key milk components as the basis, the model estimates the attainable cheese yields. It was not designed as a regulatory tool to establish minimum prices for milk usage.

In order to use the theoretical model in establishing the state wide yield, key milk component data must be accessible. While cheese plants are generally aware of the key milk component data for the milk that they receive, similar information is not available on a statewide basis. Dr. Phil Tong at California Polytechnic State University at San Luis Obispo

did conduct a study on the component content of bulk milk received by a variety of processing plants across the state. The study, however, was a sample and not a census of the state. It merely served as a basis for further debate on the yield question.

This is an extremely important issue to cheese processors. They argue that it is unfair to establish the cheese yield solely on the milk components they receive. Many cheese operations pay premiums outside the state established minimum prices to attract milk with higher yielding cheese components. Cheese plants have testified that basing the yield on their milk purchases would in effect be a penalty for attracting the milk with higher cheese yield properties.

Adding to the dilemma is the fact that cheese operations routinely add other milk components to fortify the farm milk. The fortification of condensed milk, nonfat dry milk and other milk components also boosts the cheese yields.

Nevertheless, the Panel's preference, in so far as practical, is to use the actual yield (experience) achieved in actual plant environments in California that is derived from producer milk composition (not from fortified vat yields). This is consistent with the principles followed in other aspects of the pricing formulas. While the theoretical yields have some merit as a theoretical measure of in-plant yield efficiency, the Panel is much more comfortable relying upon audited data than depending upon theoretical yields.

Moreover, the Panel does not share the view that the purpose of the Class 4b pricing formula is to price "typical" California milk. The purpose of the Class 4b pricing formula is to price milk going into the cheese plants. The payment of premiums to attract bulk milk having higher cheese yielding components can be handled once the premiums and associated milk compositions are determined.

In making the argument that it is important that the yield used in the pricing formula not be derived from milk that has been *incentivized* through the use of premiums to achieve higher proteins, cheese processors must remember that cheese operations receive substantial benefit from the sharing of pool revenues by all producers. The sharing of pool revenues via the pooling programs, both within California and in federal milk marketing orders, have lowered the prices that cheese processors would have had to pay to acquire milk. Additionally, cheese processors do not do as well in balancing the swings in seasonal demands of the higher priced usages relative to performance of butter and nonfat dry milk operations.

The Panel recommends that the manufacturing cost unit obtain the following data during the next audit cycle of cheese plants:

- fat, protein, and vat fortification costs,
- fat, protein, and other solids tests,
- protein premium data, and
- component values of bulk milk versus the use of filtered and other concentrated milk components in cheese plants.

In addition, the Panel recommends that the Department take a leadership role in organizing the Dairy Advisory Committee to explore relevant issues toward developing a cheese yield

based on the actual yield (experience) achieved in California plant environments that are derived from producer milk composition (not from fortified vat yields).

The Panel does not feel appropriate and economically rational adjustments can be made to the cheese yield with key gaps in crucial data sets and a lack of consensus amongst industry leaders. Industry stakeholders and the Department must work outside of the hearing process to develop the acceptable parameters needed to calculate an accurate cheese yield for California. Based on the hearing record, any decision at this time tends to incorporate a degree of subjectivity. Such decision would prolong the long-term debate without providing a step towards long-term resolution.

It is essential that the future modification of the cheese yield be established upon unbiased California-based data.

Panel Recommendation

Maintain current yield and test values at 10.2 @ 3.72% fat, 8.80% SNF in the Class 4b formula.

ANALYSIS AND DISCUSSION OF CLASS 2 AND 3 PRICING FORMULAS

Issue

The Class 2 and 3 price formulas are calculated by adding a specific amount to the announced Class 4a prices:

- approximately 82¢/cwt for Class 2 in Southern California
- approximately 58¢/cwt for Class 2 in Northern California
- approximately 65¢/cwt for Class 3 in Southern California
- approximately 64¢/cwt for Class 3 in Northern California

Thus, any change in the Class 4a pricing formula will impact the Class 2 and 3 pricing levels. Despite the inclusion of the Class 2 and 3 price formulas as items that would be considered in the February 1 Hearing, no formal proposals were submitted for consideration at the hearing.

Impact of the Class 4a proposals on the Class 2 and 3 prices

The Department determined that if the seven proposals to amend the Class 4a price formula would have been in effect during the five-year period 2000 to 2004, then the Class 4a and corresponding Class 2 and 3 prices by the following:

- increased all three prices by 1¢ per cwt. (two proposals)
- decreased all three prices by 4¢ per cwt. (two proposal)
- decreased all three prices by 10¢ per cwt. (one proposal)
- decreased all three prices by 23¢ per cwt. (one proposal)

Discussion

Only one hearing witness provided any significant testimony on the Class 2 and 3 price formulas. The witness testified in favor of the current pricing formulas and in favor of passing through any decrease in the Class 4a price adjustment through to the Class 2 & 3 prices.

The witness also went on testify that: *(Excerpted from February 2nd hearing transcript, page 65, lines 1-23)*

> *". . . there is nothing robust about California's Class 2 and 3 markets. In fact, it is quite the opposite. . . . While the "Other West" has steadily increased and grown well above their population share, California has dropped miserably. In absolute terms, publications and data found on CDFA's website shows Total Cottage Cheese production from 1999 – 2004 as being down 2.28 percent.*
>
> *Figure 5- All Frozen annual Production Share from CDFA's Hearing Background Resource shows ice cream production in the entire West, including California, falling below our population share in 2002-2003. Unfortunately, California's production of ice cream has not been close to its share of the nation's population in the past ten years. Again, CDFA's website data shows actual frozen product production in California to be down since 1999 by 6.68 percent, the worst of which occurred in 2004."*

The decline in the California Class 2 and 3 market raises the question of whether or not both California producers and Class 2 and 3 processors might be better off if the California Class 2 and 3 prices were more competitive with the regulated prices in other production areas, promoting the expansion of California's Class 2 and 3 usages. It does not appear to be a mere coincidence to the Panel that California's competitively priced Class 4a and 4b products are expanding relative to other production areas, while California's Class 2 and 3 products, which are not competitively priced relative to other production areas are contracting.

There is no basis for making any adjustment to the Class 2 and 3 price formulas.

Panel Recommendation

At this time, the Panel recommends that the Class 2 and 3 pricing formulas remain unchanged, although any adjustments to the Class 4a pricing formula will result in corresponding changes to the Class 2 and 3 pricing formulas.

Appendix A

Summary of Proposals

One Petition Proposal

1) Land O' Lakes
   a. decrease the f.o.b. California price adjuster for butter to -0.0314
   b. increase the manufacturing cost allowance for butter to 0.1321
   c. increase the manufacturing cost allowance for nonfat dry milk to 0.1551
   d. decrease the f.o.b. California price adjuster for Cheddar cheese to -0.0287
   e. decrease the manufacturing cost allowance for Cheddar cheese to 0.1734
   f. increase the western dry whey manufacturing cost allowance to 0.2580.
      Note: original petition requested that this allowance cover 80% of the volume produced. The Department was unable to release a final number prior to receiving the petition. This number was subsequently calculated to be 0.2580 by the Department.
   g. decrease the average fat in raw milk used in Cheddar cheese plants to 3.65
   h. decrease the average solids-not-fat in raw milk used in Cheddar cheese plants to 8.78
   i. decrease the Cheddar cheese yield to 10.0

Six Alternative Proposals

2) Milk Producers' Council
   a. decrease the f.o.b. California price adjuster for butter to -0.0306
   b. decrease the f.o.b. California price adjuster for Cheddar cheese to -0.0234
   c. increase the manufacturing cost allowance for western dry whey to 0.18
   d. add a "snubber" to the western dry whey portion of the product calculation in the 4b price. This snubber will replace a negative western dry whey factor with zero.

3) California Dairy Campaign
   a. remove the f.o.b. California price adjuster for Cheddar cheese from product value formula
   b. decrease the manufacturing cost allowance for Cheddar cheese to 0.1634
   c. decrease the manufacturing cost allowance for western dry whey to 0.159
   d. add a "snubber" to the western dry whey portion of the product calculation in the 4b price. This snubber will replace a negative western dry whey factor with zero.
   e. increase the average fat in raw milk used in Cheddar cheese plants to 3.94
   f. increase the average solids-not-fat in raw milk used in Cheddar cheese plants to 8.95
   g. increase the Cheddar cheese yield to 10.92

4) Western United Dairymen
   a. increase the f.o.b. California price adjuster for butter in the Class 4a formula to -0.0350
   b. decrease the f.o.b. California price adjuster for Cheddar cheese in the Class 4b formula to -$0.0185

5) California Dairies, Inc
   a. decrease the f.o.b. California price adjuster for butter in the Class 4a formula to -0.315

b. increase the manufacturing cost allowance for butter to $0.1570
c. increase the manufacturing cost allowance for dry milk to $0.1650
d. increase the manufacturing cost allowance for whey butter to $0.1570

6) Alliance
a. decrease the manufacturing cost allowance for Cheddar cheese to 0.171
b. increase the manufacturing cost allowance for AA butter and whey butter to 0.157
c. decrease the f.o.b. California price adjuster for Cheddar cheese to -0.0232
d. decrease the f.o.b. California price adjuster for AA butter to -0.0315
e. decrease the fat test to 3.67
f. increase the SNF test to 8.93
g. but leave the yield for Cheddar cheese at 10.2
h. add a “snubber” to the western dry whey portion of the product calculation in the 4b price. This snubber will replace a negative western dry whey factor with zero.

7) Institute
a. decrease the manufacturing cost allowances for Cheddar cheese to 0.1734
b. increase the manufacturing cost allowances for skim whey powder to 0.2675
c. increase the manufacturing cost allowances for AA butter and whey butter to 0.1321
d. increase the manufacturing cost allowances for nonfat dry milk to 0.1551
e. decrease the f.o.b. California price adjuster for Cheddar cheese -0.0287
f. decrease the f.o.b. California price adjuster for AA butter -0.0314
g. decrease the fat test to 3.67
h. decrease the SNF test to 8.75
i. decrease the yield for Cheddar cheese to 10.05

Appendix B

Cheddar Cheese Yield Determination using the Van Slyke Formula, Weighted Averages, and Proration

Van Slyke Formula
Advocates of the Van Slyke approach suggest that it is becoming easier to achieve agreement on the methods used to estimate the parameters for the formula:

- Use the generally accepted casein loss and other solids retention factors of 0.1 and 1.09, respectively;
- Set moisture at the weighted average of the block plants average for one or more years;
- Base the fat and SNF tests on California averages for one or more years; and
- Elimination of fortification costs from the plant cost summaries when setting the manufacturing cost allowance.

However, fat retention and casein ratios are more problematic.

Fat Retention Issues:

- It may be possible to use receipts and usage figures from block plants to estimate fat retention
  - a high fat retention probably implies a lower whey fat yield (fat in the vat = fat in the cheese + fat in the whey + fat loss).
- Fat retention should not be used as a policy instrument; it should represent an average and not a low rate; all issues regarding the setting of competitive minimum prices needs to be addressed by the policy instrument: the level of the manufacturing cost allowance.

Casein Ratio Issues:

- Use of a casein to SNF ratio requires a two step process: estimate the protein to SNF ratio and estimate the casein to protein ratio
- It would be preferable to use a one step process by collecting statewide fat, protein and other-solids data on an ongoing basis
- The one-year long Tong study (May 2000 to April 2001) is an alternative source of casein ratios. The thirteen participation plants may not have been representative of the industry as a whole. The study is now four years old.
- If the fat and SNF tests are to be based on all California milk, the casein ratio needs to be based on all California milk, not just on non-cheese plant milk

Finally, advocates of the Van Slyke formula also tended to be opponents of both weighted averages yields and proration. However, weighted averages and proration are the only methods the Department has ever used in setting yields and tests:

- 9.8 @ 3.60% 8.70% in 1989 using weighted average yield and tests
- 10.0 @ 3.65% 8.78% in 1997 using proration
- 10.2 @ 3.72% 8.80% in 2003 using proration

Weighted Averages
Opponents of the use of weighted average yields and tests argued that these are qualitatively different from the averages used to consider changes to California f.o.b. price adjusters, butter and nonfat dry milk yields, and manufacturing cost allowances:

- cheese plants add ultra filtered and other condensed milk products to their cheese vats; and
- cheese plants pay premiums to attract milk with a high casein content and an optimal fat to casein ratio.

By collecting fat, protein, and other-solids data from all the Cheddar cheese plants in the cost studies, it would be possible to correct for the use of concentrated products. In addition as it did once in the past, the Department can in the future, collect information on premiums associated with increasing cheese yields.

Finally, cheese plants are not the only Class 4 processors that achieve higher yields and efficiencies from higher test milk. Fortified milk will increase yields both from the vat at cheese plants and from the separator at butter and nonfat dry milk plants. Higher test milk in the vat or the separator will increase yields per hundredweight of milk, reducing unit fixed costs (and total unit cost if the increase in unit variable cost to achieve the higher test is less than the reduction in unit fixed cost). The fortification of milk used in butter and nonfat dry milk plants is a direct result of the introduction, along with pooling, of component pricing for all milk produced that occurred during 1969. With the introduction of component pricing, fat tests have steadily increased since 1972; SNF tests began increasing in 1987:

Changes in Five-Year Average Farm Tests and Butter/Powder Yields since the inception of Pooling in 1969

	Fat Test	SNF Test	lbs. butter per cwt.	lbs. powder per cwt.
1970 to 1974	3.58%	8.72%	4.30	8.81
2000 to 2004	3.67%	8.75%	4.40	8.84
Increase	0.09%	0.03%	0.11	0.03
1985 to 1989	3.64%	8.66%	4.37	8.75
2000 to 2004	3.67%	8.75%	4.40	8.84
Increase	0.03%	0.08%	0.04	0.08

That SNF tests did not begin increasing until 1987 may be due to the increase in the SNF price relative to the fat price since 1987. Prior to 1987, SNF made up about 53% of the hundred-weight value of the overbase price, ranging from 38% to 68%. Since 1987, SNF has made up about 63% of the hundredweight value of the overbase price, ranging from 43% to 77%.

Proration

Opponents of proration based their arguments on the use of the weighted average yield and tests as one of the two anchor points, and on the fact that proration is an unrigorous method. Issues regarding weighted averages are discussed above. The Panel acknowledges the lack of rigor in using proration. The Panel also feels that more data needs to be collected before either the Van Slyke or the Weighted Average method can be used to establish yields and tests. As a result, all that is left to the Panel is proration. Had the Department not used proration in 1997 and 2003, the yields and tests would still be those established in 1989: 9.8 @ 3.6% 8.7%. No witness at the hearing suggested that these were reasonable yield and test numbers.

Appendix C

Summary of Panel Recommendations

The Panel recommends that:

Regarding the Class 4a and 4b pricing formulas -

- f.o.b. California Price Adjusters be decreased
    - from –3.32¢ to –2.85¢/lb for Grade AA butter
    - from –3.21¢ to –2.90¢/lb for block Cheddar cheese.
- In the Class 4b pricing formula, the cheese yield and associated fat and SNF vat tests should remain at 10.2, 3.72% vat fat, and 8.80% vat SNF, respectively.
- The support purchase prices for butter, nonfat dry milk, and block Cheddar cheese should be removed as floors to their respective commercial commodity prices in the Class 4a and 4b pricing formulas.
- The dry skim whey factor should be removed from the Class 4b pricing formula.
- The manufacturing cost allowances be
    - increased from 13.2¢ to 15.6¢/lb for Grade AA butter and whey butter;
    - increased from 15.0¢ to 15.2¢/lb for nonfat dry milk; and
    - decreased from 17.5¢ to 17.1¢/lb for block Cheddar cheese.

At this time, the recommendation is for the Class 2 and 3 pricing formulas to remain unchanged, except as the Class 2 and 3 prices will be impacted by the changes in the Class 4a pricing formula.

Price Effects of Panel Recommendations

Had the Panel recommendations been in effect from January 2000 to December 2004, the five-year average annual revenue impact would have been:

- down $0.10/cwt for Class 2, 3 and 4a prices;
- down $0.18/cwt for Class 4b prices; and
- down $0.12/cwt for pool prices.

Note: The supply/demand conditions that existed during the 2000-2004 period may or may not be the same conditions that will occur in the future. If the current balance between the milk supply and demand is maintained, then the future price impact of the recommendation could be less significant than the average impact observed for the 2000 to 2004 period. If the milk supply relative to demand is not as balanced as the 2000-2004 situation, then the estimated price impact of the recommendation could be more significant than the average impact observed for the 2000 to 2004 period.

Arguments in Favor of Panel Recommendations

- Increasing milk supplies relative to fairly stable and slightly declining Class 1, 2, 3 product usages underscore the importance of setting competitive class 4a and 4b prices for the long-term viability of the California dairy industry.
- Increasing cow numbers, relatively high production per cow, demonstrated history of increasing milk production, and relatively favorable milk prices compared to production costs favor continued production increases.

- California's Class 4a and 4b prices must be established at levels that will clear the total milk supply. If not, market forces can undermine the established minimum prices.
- Unlike federal order provisions, there is no legal flexibility in avoiding paying the California's Class 4a and 4b prices.
- The recommendations regarding the f.o.b. California price adjuster and the manufacturing cost allowances were developed using California data compiled by the Department. This methodology is consistent with the Department's past practices.
- Commodity support purchase price floors and the producers' whey factor proposals in the Class 4b price formula both tend serve as economic handicaps in the national competition for manufactured products sales. Commodity price floors are not included in the federal order pricing formulas.
- Removing the dry skim whey factor from the Class 4b formula - .
  - Will ease the financial burden of whey disposal on smaller cheese plants;
  - Will simplify the complexity of the Class 4b pricing formula.
- Competition continues to expand as manufacturing plant capacity in New Mexico, Idaho Oregon grow. Meanwhile, DFA Petaluma, Suprema Specialties, Sorrento Cheese and other California plants have recently closed.
- Empirical data and sufficient stakeholder input is lacking to resolve the technical issues over the cheese yield.
- Although the recommendations are likely to grant less minimum price flexibility than most processors sought, the recommendations move in the direction advocated by processors to enhance the long-term viability of the California dairy industry.

Arguments Opposed to Panel Recommendations

- Some producer leaders (with exception of cooperative leaders that operate plants) testified that environmental issues will curtail the production increases.
- Some producer leaders will take strong exception to the widening gap between the California minimum Class 4a and 4b prices relative to the corresponding federal order Class IV and III prices that Panel recommendations will encourage.
- Many producers perceive the incorporation of the price floors as necessary protection from marketing abuses by processing firms. There is a tendency to place far more impact on the floors than actually occurred.
- Producer leaders (including cooperatives that operate butter/nonfat dry milk plants) stressed that the current Class 4b formula should maintain the opportunity for a positive value for whey products. Under the recommendation not all producers would share in the margins that some added value whey products return to cheese plants.
- Continued use of California-based data is consistent with the past Departmental practices, but past practices do not necessarily justify continued use of any one method.
- To the extent that milk movement and processing practices are not impacted, the total regulated minimum price revenues to producers will decrease slightly in the short run.
- A slightly greater portion of the Class 4b value would be available to share with producers through premium programs to the detriment of all other producers participating in the pool.
- Recommendations will be characterized as returning to "cheap milk" policy.
- Producer trade groups generally advocated for a cheese yield similar to the recommendation or even slightly higher. Processors advocated for a decrease in the cheese yield.

- Producer trade groups advocated for maintaining Class 4a and 4b elements that were added to the formulas in 2003 (whey value factor, minimum support purchase price factor). These elements would be removed in the recommendation.